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ACCEPTANCE PROCEDURES: MICROFILM PRINTER

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Prepared By

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(NASA-CR-141661) ACCEPTANCE PROCEDURES: MICROFILM PRINTER (Technicolor Graphic Services, Inc.) 5 p HC $3.25 CSCL 14D

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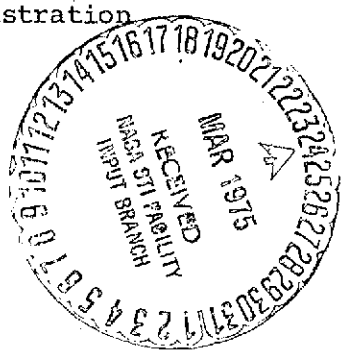
Photographic Technology Division
National Aeronautics and Space Administration
Lyndon B. Johnson Space Center
Houston, Texas



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This report has been reviewed

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I. SUMMARY

These tests will be performed as acceptance tests for a special order automatic additive color microfilm printer. Tests include film capacity, film transport, resolution, illumination uniformity, exposure range checks and color cuing considerations.

II. Procedures

A. Film Capacity and Transport Checks

1. Film Capacity: Check printer capacity with a minimum of 1200 feet of 7242 stock.

2. Operating Mode: Operate the printer in 16mm mode, printing from sprocketed and unsprocketed stock. Process the film and examine result subjectively for scratches or other gross anomalies.

3. 16/35mm Conversion: Convert printer from 16mm to 35mm mode and 35mm to 16mm mode checking time required for the operation.

4. Printer Speed: Operate printer at indicated speeds including a minimum of 60 feet per minute and check with a tachometer head to tail over 1200 feet of 16mm film.

B. Exposure, Illumination, and Resolution Checks

Print the supplied 7242 master. Cue each of the 50 automatic 0.025 log E increments and 24 manual log E increments on 7242 color film. Repeat procedure three times.

Print the 7242 master and Kodachrome master at midrange light valve settings on 7242 color film. Cue color changes over Log E 0.025 increments for the full range of each color spaced 5 inches apart on the print run at a minimum of 60 feet per minute.

Exposure Checks

1. Read the 3 each 7242 prints and determine that each of the automatic and manual 0.025 log E steps produced proper density level.

Illumination Check

1. Read the prints from the 7242 master produced at midrange light valve setting and examine film at even density frame for corner-to-corner exposure. Density must be within ±0.050 Log E limits.

Resolution Check

1. A USAF 1951 target, $\sqrt[6]{2}$ (about 10%) bar spacing frequency per grouping, is imaged on the 7242 master.

2. Read the resolution on each of the three 7242 prints at optimum and plus or minus one stop exposure with a microscope at 50X plus or minus 20X magnification. Resolution loss should not exceed one target grouping for either horizontal or vertical bars.

Cuing Checks

1. Read red, green and blue densities on the prints from the 7242 and Kodachrome masters to observe the cued color changes of 0.025 log E over color range. Read the densities on the single density frame on the 7242 master print and note incremental color changes.